

REMARKS

Reconsideration of the above-referenced application in view of the above amendment, and of the following remarks, is respectfully requested.

Claims 2-5, 7-10, and 12-21 are pending in this case. Claim 2 is amended herein. Claims 5, 7-10, and 12-21 stand allowed.

The Examiner rejected claims 2 and 3 under 35 U.S.C. § 103(a) as being unpatentable over Mitani (JP 60148163) in view of Naem et al. U.S. Patent 4,476,475) further in view of Malhi et al. (U.S. Patent 5,225,697) further in view of Lee et al. (U. S. Patent 6,509,601).

Applicant respectfully submits that amended claim 2 is patentable over Mitani in view of Naem et al, Mahli et al, and Lee et al as there is no disclosure or suggestion in the references of a capacitor located on a recrystallized polysilicon layer over a gate electrode layer as required by claim 2. Mitani teaches a trench capacitor having an electrode 11, dielectric 10, and a recrystallized layer 4 serving as the other capacitor electrode. As the Examiner noted, Mitani fails to teach the recrystallized layer over a gate electrode and the claimed recrystallized polysilicon layer/first electrode. Mitani also fails to teach a capacitor located over both the recrystallized layer and the gate electrode.

Naem is applied by the Examiner to teach a recrystallized polysilicon layer over a gate electrode. While Naem does teach a recrystallized polysilicon layer over a gate electrode, the recrystallized layer of Naem forms an additional channel region (and additional source and drain regions) of the device. The device of Naem is a stacked transistor having a gate between upper and lower channel regions. However, Mitani uses a recrystallized polysilicon as a capacitor electrode rather than as its channel region. Naem would not suggest to one of ordinary skill in the art, modifying Mitani by

placing a gate electrode below the capacitor electrode (recrystallized polysilicon) layer 4 in order to accomplish the claimed invention. At most, Naem would suggest modifying the transistor gate of Mitani to include upper and lower channels. There is no suggestion for modifying the capacitor of Mitani from a trench capacitor to a capacitor located on a recrystallized layer and over a gate electrode as required by the claim.

In addition, the Examiner applies Malhi to teach the required recrystallized polysilicon/capacitor electrode. The Examiner refers to column 1 and FIG. 2 of Malhi. While column 1 refers to a recrystallized polysilicon layer, such a layer is not shown in FIG. 2. The recrystallized polysilicon layer forms one electrode of the storage capacitor. So, while Malhi and Mitani teach a recrystallized polysilicon layer as a capacitor electrode, neither discloses nor suggests the claimed recrystallized polysilicon and first electrode and/or the capacitor including the first electrode and being located on the recrystallized polysilicon layer. Accordingly, there is no disclosure or suggestion in the references of a recrystallized layer in addition to first and second electrodes of a capacitor.

Even if there was a suggestion in the references of using the recrystallized layer in addition to the capacitor electrodes, there is no disclosure or suggestion of a capacitor located on a recrystallized polysilicon layer and over a gate electrode layer. Only Naem shows a recrystallized layer over a gate electrode. Naem only teaches the recrystallized layer for an upper channel region. There is no disclosure or suggestion in the references of a capacitor located on a recrystallized polysilicon layer over a gate electrode layer. The references as combined fail to teach a capacitor located over both the recrystallized layer and the gate electrode. Accordingly, Applicant respectfully submits that claim 2 and the claims dependent thereon are patentable over the references.

The Examiner objected to claim 4 as being dependent upon a rejected base claim. Applicant requests that the objection be withdrawn in light of the comments above directed towards claim 2 from which claim 4 depends.

In light of the above, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of claims 2-5, 7-10, and 12-21. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

Respectfully submitted,

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